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**THE OTTAWA TREATY AND COALITION WARFARE:  
AN UNHOLY ALLIANCE?**

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**The Ottawa Treaty and Coalition Warfare: An Unholy  
Alliance?**

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## **ABSTRACT**

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The purpose of this study is to show how the United States and our coalition partners have failed to fully consider the impact of the recently signed Ottawa Treaty to ban Anti-Personnel Landmines (APLs) on our ability to execute successful coalition warfare. This paper describes the serious implications for NATO and Coalition operations in view of the bulk of our Allies signing the Ottawa Treaty banning the use of all anti-personnel landmines (APLs).

This paper will argue that the cost to NATO and other Coalition operations due to Ottawa clearly demonstrates the shortcomings in this treaty. This paper also provides some key recommendations that, if adopted, will ensure that the United States can fight effectively with Allies all over the globe.



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## **THE OTTAWA TREATY AND COALITION WARFARE: AN UNHOLY ALLIANCE?**

An important part of my ability to meet the threat is the capability that I now have with anti-tank and anti-personnel landmines...If forced to fight without these weapons, Combined Forces Command will require additional force structure to offset the lost capability and we will take additional casualties.

— GEN John H. Tilelli, Jr.  
CINC, CFC

Since the Declaration of Independence, the United States has relied on Allies to assist us during times of war. In fact, with the exception of the Mexican War and the American Civil War, we have always fought our wars within the context of a coalition. With today's increasing global instability, coupled with our rapidly dwindling Armed Forces and defense dollars, the United States must rely more and more on our coalition partners to respond to both asymmetric and conventional threats to our security. In view of this fact, it is essential that our doctrine and weapon systems be compatible with our allies. Also, it is critical that we conduct arms control negotiations in concert with our partners. Indeed we must bring all elements of national power and influence to bear when negotiating any and all arms control agreements, to protect the military equities of the United States and our allies. The stakes are simply too high to do otherwise. President Clinton stated as much in the

1998 version of our National Security Strategy when he declared that "our security challenges are best achieved -- or can only be achieved - through our alliances and other formal security structures, or as a leader of an ad hoc coalition formed around a specific objective."<sup>1</sup> The purpose of this study is to show how the United States and our coalition partners have failed to fully consider the impact of the recently signed Ottawa Treaty to ban Anti-Personnel Landmines (APLs) on our ability to execute successful coalition warfare. The rush to sign the Ottawa Treaty and the United States' capitulation to internal political pressure will have significant and far-reaching implications on how we will fight with our coalition partners. This study will briefly describe the events that led to the Ottawa Treaty and the vacillating United States' policy that ultimately led to the release of Presidential Decision Directive 64. We will then examine the impact of this Treaty on coalition warfare for NATO, Korea and Southwest Asia. Finally, the study will conclude with a series of recommendations for a modification of United States' policy.

#### ANTI-PERSONNEL LANDMINE ARMS CONTROL

The indiscriminate use of APLs, often called the "the smallest weapons of mass destruction,"<sup>2</sup> by military, guerrilla,

and para-military forces worldwide has caused immense suffering particularly in the Third World. The International Committee (ICRC) of the Red Cross has estimated that 100 million APLs are believed to be in the ground killing and maiming over 2,000 innocent civilians every month.<sup>3</sup> We have all seen Princess Diana comforting landmine victims immediately before her death in August 1997. It is with these disturbing images fresh in the public's mind that much of the world community negotiated and signed a comprehensive ban on the use, manufacture, storage and transfer of APLs. This ban, popularly called the Ottawa Treaty or Ottawa Convention, was signed with great fanfare in December 1997. This treaty has been called "an extraordinary success" and that the Ottawa Treaty signing should "...be not just the culmination of one exemplary anti-weapons campaign but the beginning of another."<sup>4</sup>

After months of maintaining that APLs are a vital weapons system for the United States' global responsibilities, and after demanding that any Arms Control agreement related to APL restrictions must be conducted in a traditional Arms Control forum, President Clinton announced in July 1998 that the United States would work toward signing the so-called Ottawa Treaty that bans the manufacture, transfer, sale and use of all APLs.<sup>5</sup> By making this announcement the President succumbed to political and public pressure, despite contrary and compelling military

advice, to participate in an Arms Control process unlike any other in our history.<sup>6</sup> His capitulation to forces clearly at odds to the national interest sets a disturbing precedence for the future of our Arms Control strategies as we move into the 21st Century.

The United States first began its entry into the most difficult and problematic of the shaping actions, arms control, with our participation in the Washington Naval Conference in the early 1920's. At first glance the United States and Great Britain won an overwhelming diplomatic victory by splitting supremacy of the seas between them with other countries (notably Japan) a distant second. The Washington Conference, unique in diplomatic history up till that time, was hailed as a great step forward in preventing a strategic arms race not unlike that which increased tensions and some historians argue led indirectly, if not directly to the "War to End All Wars."<sup>7</sup> As we now know the Washington Conference was not a significant victory for either the United States or Great Britain. It effectively ended the expansion of the US fleet, failed to provide the US and the UK with sufficient capital ships to protect their far-flung possessions such as Singapore and the Philippines, and was not verifiable allowing Japan and Germany to easily violate the Treaty. The Washington Naval Conference has provided an excellent example of "how not to do it." Unfortunately the

United States seems to have forgotten these lessons as we struggle to achieve meaningful APL Arms Control.

The Clinton Administration, like all others before him since Truman, has recognized the importance of pursuing meaningful Arms Control negotiations and agreements and they recognize the importance of such negotiations as critical shaping tools. In the most current National Security Strategy the Clinton Administration underscores the importance of Arms Control efforts that...

...help provide the assurance of security necessary to strengthen cooperative relationships and direct resources to safer, more productive endeavors. Agreements that preserve our crisis response capability shape the global and regional security environments, and simultaneously reinforce our commitment to allies and partners. Our arms control measures are an essential prevention measure for enhancing U.S. and allied security.<sup>8</sup>

The history of US Arms Control negotiations since the Nixon Administration has also established the criteria that Arms Control agreements must be **verifiable, enforceable, and effective** to be useful.<sup>9</sup> While "verification" was the watchword during the Reagan presidency, we have not always entered into Arms Control agreements that meet with the criteria above. Treaties such as the 1972 Biological Weapons Convention and the 1972 Anti-Ballistic Missile Treaty are but two agreements entered into by the United States that have been violated by signatories with no punitive actions or that were

unverifiable.<sup>10</sup> Unfortunately, after a period in which the above criteria was ruthlessly followed with regard to strategic (i.e. nuclear) Arms Control, the United States has recently started down the slippery slope toward "feel good" APL Arms Control that can potentially undermine the ability of US forces to protect themselves while responding to today's myriad of threats. Although the creators of the Ottawa "process" have religiously stated that they have no intention of now turning their efforts beyond landmines, they are being disingenuous at best. They are already pointing toward banning anti-tank mines, certain bullets and small arms, and submunitions.<sup>11</sup>

Beginning in 1994 the United States, recognizing the insidious nature of the indiscriminate sowing of APLs, established a US policy on a landmine control regime. This policy announced, by the President at the UN, called for the ultimate elimination of APLs, particularly long-lived "dumb" APLs in a multi-lateral framework. The policy further called for the multi-lateral forum to be the UN sponsored Conference on Disarmament (CD) to strengthen the Convention on Conventional Weapons (CCW).<sup>12</sup> The CD and the CCW are the traditional forums for Arms Control that encompasses the criteria of verification, enforcement and effectiveness.<sup>13</sup>

Pursuant to the President's 1994 policy announcement, the United States led the effort in the CD that resulted in an

amended CCW Protocol II entitled "Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and other Devices as Amended on May 3, 1996." This protocol placed severe restrictions on the use, storage, transfer and production of mines. It allowed for the responsible use of APLs by military forces through the use of clearly marked, recorded and observed minefields. And it contained provisions that followed standard Arms Control criteria.<sup>14</sup> In addition to the amended CCW Protocol, the United States took several unilateral steps to demonstrate resolve to the international community. These steps included destroying the entire US stockpile of non self-destructing "dumb" APLs (outside of Korea) and providing a significant increase in funding for international demining efforts as well as providing training assistance to deminers worldwide.<sup>15</sup> The President followed up this meaningful Arms Control work with Presidential Decision Directives (PDD) 48 and 54. These PDDs, issued in May 1996 and January 1997 respectively, further defined our APL policy by stating that we would continue to support additional APL Arms Control in the Conference on Disarmament, and that we must maintain all APLs for Korea and all self-destructing APLs to "safeguard American lives" while we maintain our global commitments. In addition, these PDDs provided for the unilateral destruction of our entire stockpile (outside Korea) of "dumb" anti-personnel landmines.<sup>16</sup>

What both the Administration and the Department of Defense (DoD) failed to anticipate and counter was the highly effective international campaign against APLs conducted by a loose coalition of Non Governmental Organizations (NGOs). These organizations included the International Campaign to Ban Landmines (ultimate winner of the 1997 Nobel Peace Prize), the Committee of the International Red Cross, the Project on Demilitarization and Democracy, the Vietnam Veterans of America, and several others. Such high profile individuals as Princess Diana, Pope John Paul II, and Senator Patrick Leahy (D, VT) supported these organizations. These organizations ran a brilliant, high-tech, and well-coordinated campaign with a simple objective: Ban all Anti-Personnel Landmines with no exceptions or conditions as soon as possible.<sup>17</sup> The NGOs' were able to gain the support of the Prime Minister of Canada who agreed to sponsor what became known as the "Ottawa Process." The Ottawa process quickly gained speed as the Prime Minister sought support for the total worldwide ban on APLs. He proposed that virtually all recognized countries meet in Oslo, Norway to agree to the wording of a complete ban in September 1997. Through the skillful use of the media, Internet, and Princess Diana's tragic death, the Oslo Conference was able to gain wide consensus on a total ban with no restrictions or exceptions with a formal Treaty signing in Ottawa, Canada in December 1997.

The President quickly came under intense pressure both through Congress led by Senator Leahy and the public led by the NGOs. The NGOs stepped up their campaign by seeking and receiving sympathetic press coverage and using celebrity patrons of their cause.<sup>18</sup> The Administration and DoD did almost nothing to counter this campaign until the weeks just prior to the September 1997 negotiations. Consequently, and perhaps inevitably (what politician can resist the call to end such protracted suffering that was shown each evening on TV), the President decided in late August 1997 to join the Ottawa Process. The United States negotiated in good faith, but was unable to get exceptions for use of APLs in Korea and for the use of self-destructing APLs (APLs which did not contribute to the humanitarian problem the Ottawa Treaty was attempting to solve). The key provision of the Treaty is that "Signatories undertake to never, under any circumstances: use APL; produce, stockpile, retain or transfer APL to anyone - directly or indirectly; or assist, encourage, or induce anyone from any Treaty activity."<sup>19</sup> The specter of the dead Princess Diana caused virtually all other nations to sign the treaty against the advice of most military forces to include that of NATO countries.<sup>20</sup> The United States with other "leper" nations such as Russia, Iraq, Iran and China failed to agree to the final treaty terms. To his great credit, and resisting considerable

press and international pressure, the President withdrew from the negotiations on 17 September 1997 saying that the treaty could not meet US National Security Concerns.<sup>21</sup> Once again the President announced significant unilateral measures such as our commitment to find alternatives to APLs that would allow us to end the use of all APLs outside of Korea by 2003, and in Korea by 2006. We also committed an additional \$10 billion for demining efforts worldwide. But he also stated that we must retain our self-destructing landmine capability.<sup>22</sup>

The primary reasons behind our failure to initially sign the Ottawa Treaty harken back to our original criteria for worthwhile Arms Control agreements. Unfortunately, despite their good intentions, the Ottawa Treaty was not effective, enforceable, or verifiable. The Ottawa Treaty was simply a "feel good" humanitarian agreement not unlike the Kellogg-Briand Pact of 1929 that outlawed war. The Ottawa Treaty contained no provisions for verification or enforcement. It simply counted on the good will of the signatories. Finally, the Treaty did nothing to address the real humanitarian problem: the demining of the areas affected by the 100 million landmines worldwide.

With the President's announcement of September 1997 the DoD embarked on an aggressive campaign to find alternatives to APLs within the President's timelines. The estimated cost is currently \$4.5 billion to replace the dumb mines with systems

that are not as militarily effective. Unfortunately, the President continued to experience considerable pressure, particularly through Senator Leahy and the NGOs (Nobel Prize Winner Jody Williams called President Clinton a "Weenie" for agreeing with the CJCS that he must withdraw from the Oslo negotiations). Finally, in July 1998 the Secretary of State and the National Security Advisor (both favoring the Ottawa Treaty) announced PDD 64 which stated that the United States was committed to sign the Ottawa Treaty by 2006 and will eliminate all APLs to include those that self-destruct.<sup>23</sup> This announcement came as a total shock to the DoD. The new PDD reversed all previous APL Arms Control efforts and disregarded most, if not all, military equities. Thus the United States has embarked down the road to signing an Arms Control agreement in 2006 that will have no worth above and beyond allowing us to feel like we are solving the problem. The Treaty will do nothing to shape the International Arena, will eliminate a weapon that is critical to safeguard American lives, will cost the DoD billions to develop and field alternatives that are militarily less effective than current systems. And, most tragically, will do nothing to address the real humanitarian problems that the indiscriminate uses of APLs cause.<sup>24</sup>

## UNITED STATES' MINE SYSTEMS AND TECHNOLOGY

Mines have been with us for many centuries, but their modern form began to evolve from the crude devices used during the American Civil War. Modern mass produced mines surfaced prior to World War II and have evolved in a number of different ways from simple pressure fuses in non self-destructing (commonly called "dumb") mines, to sophisticated electronically fused, blast-resistant, self-destructing ("smart") mines that form the bulk of the United States' inventory. With today's military getting smaller and with the number of deployments and worldwide responsibilities increasing, one of the most capable weapons systems available to a commander is the modern and highly reliable self-destructing mine. These systems, developed in the 1970's in response to our Vietnam experience, combined with very restrictive use controls, do not contribute to the humanitarian problem of indiscriminate sowing of long-lived mines that kill and maim civilians in many areas of the world.

The American experience in the Korean and Vietnam Wars, with the enemy using our mines against us, and with mines causing large numbers of innocent civilian casualties, caused a distinct technological shift in the way we viewed mine warfare. First, to prevent an enemy from merely picking up a mine and moving it out of the way, we began to add "anti-handling" devices to a

percentage of our mines. These are secondary fuses usually attached to the underside of a mine that causes the mine to detonate when disturbed. This reduced the threat of our mines being used against us. Second, while there will always be a tactical need for "dumb" mines under certain circumstances, to eliminate the threat to non-combatants and US forces and to ensure commanders have the freedom to maneuver on a battlefield uncluttered with mines, the United States developed a series of self-destructing mines, commonly called the Family of Scatterable Mines or FASCAM. The mines can be employed throughout the length and breadth of the battlefield from a few meters in front of an infantry position to hundreds of kilometers deep in the enemy rear area. These mines are employed using a variety of means including by hand, truck and armored vehicle, helicopters, artillery, and high performance aircraft. Enemy combat engineers normally use the anti-tank and anti-personnel mines together with the anti-personnel mines protecting the anti-tank mines against breaching attempts. All the "smart" mines are programmed to self-destruct at pre-determined periods of time after employment. This selective self-destructing capability allows the commander to have the maximum flexibility to maneuver back through the area currently covered by mine. Exhaustive tests of the US Army stockpile have proved these mines to be 99.999% reliable.<sup>25</sup> Best of all is

that these mines do not pose a "post-battle" threat to innocent civilians.

#### IMPACT OF ANTI-PERSONNEL LANDMINE ARMS CONTROL POLICY IN COALITION WARFARE (NATO)

The United States has had a special relationship with our NATO partners since the end of World War II. As a coalition it is undoubtedly the most successful in history and has led directly to stability in Europe through its united response to repeated crises with the Warsaw Pact and the Soviet Union. It is also clear that one of the major reasons for the fall of the Soviet Union was the effectiveness of the NATO coalition. The NATO alliance relies largely on key agreements to sustain the cooperation of its members. These agreements such as Standard NATO Agreements (STANAGs) and the standardization of some doctrine and weapons systems have been formulated through intense negotiations between member nations. The military and civilian leaders of these members nations have always been party to these key negotiations. Unfortunately during the Ottawa Treaty negotiations that took place in Oslo, Norway in August and September 1997 this was not the case.<sup>26</sup> This section examines how the signing of the Ottawa Treaty by the majority of

NATO member nations will have serious impact on how the United States will fight within the coalition.

All member nations of NATO with the exception of Turkey and the United States have signed and are in the process of ratifying the Ottawa Treaty. Turkey has a direct threat to its security in Iraq and the United States has significant worldwide military commitments. The first impact of this treaty on the coalition is in the area of stockpiling and storage of APLs. The Ottawa Treaty specifically states that signatories agree not to "develop, produce, otherwise acquire, stockpile, retain or transfer to anyone, directly or indirectly, anti-personnel landmines." The Treaty further defines "transfer" as "Transfer involves, in addition to the physical movement of anti-personnel landmines into or from national territory, the transfer of title to and control over the mines, but does not involve the transfer of territory containing emplaced anti-personnel landmines."<sup>27</sup>

The storage and transfer issue is key to our ability to fight within the confines of a NATO operation. The Ottawa Treaty prohibits the storage of anti-personnel landmines of any kind within the boundaries of the "state(s) party(s)."<sup>28</sup> Currently and historically the United States has stockpiled various equipment and supplies to include all types of ammunition on foreign soil in accordance with various agreements and to support forward deployed forces. In recent years,

particularly as a result of the Gulf War, much equipment has been stockpiled a number of Southwest Asian locations. Although, due to a unilateral decision by the United States back in 1995, we have destroyed all stockpiles of non self-destructing APLs outside Korea, these stockpiles still include a large number of self-destructing landmines of all types. The stockpile and storage of these mines for our forward-deployed forces and to prepare for potential conflicts are the keys to our ability to respond to contingencies in those regions. For example: should our forces in Bosnia (or potentially in Kosovo) require the use of APLs to increase their level of force protection or to respond if open hostilities develop they will not be able to get these weapons from stockpiles currently in Germany. Germany is a party state to the Ottawa Convention and is prohibited from storing these critical weapons. In addition, if we had to then ship these weapons from the United States to Kosovo they could not be brought through the normal intermediate or staging airbases such as Ramstein or any of the other bases in the United Kingdom, Italy, or Germany. These weapons would have to be shipped directly to the battlefield. Thus due to the Ottawa Treaty our forces could be placed in severe jeopardy in terms of timeliness of resupply and the use of critical airlift assets that could be better used elsewhere.

The same situation exists in Diego Garcia, which is sovereign territory of the United Kingdom. The U.S. has pre-positioned sets of equipment on the island and although the exact contents of these sets of equipment are classified, it is safe to speculate that these sets include both FASCAM emplacement systems and the mines themselves. The United Kingdom is also a state party to the Ottawa Convention, which upon entry into force of the treaty makes this storage a violation of the treaty for the UK. Should the United States be forced to remove those mines forces in that region facing the very real threat of Saddam Hussain can expect similar problem as European based soldiers in the scenario above. Once more United States' and allied soldiers would be placed at a distinct disadvantage by not having a critical force multiplier available as soon as it is required; it would also divert scarce and vulnerable strategic lift assets (both air and sea) from other, more critical, missions.

Unfortunately our NATO allies did not fully consider the implications that a seemingly innocuous ban on storage and transfer of APLs would have on the alliance's ability to fight. They were swept up by the euphoria of the Canadian-backed International Campaign to Ban Landmines and the desire to pass an agreement that would stand a memorial to the recently deceased Princess Diana.

Another impact of the Ottawa Treaty on our ability to fight effectively alongside our NATO allies is obvious at the tactical and operational level. Our coalition allies in NATO have stated time and again that with their signing of the Ottawa Convention they see no reason to place any caveats on their implementation or interpretation of the treaty or to place any exceptions its enforcement.<sup>29</sup> The implications on the way we will fight are profound. Since the country with the most powerful military is not a signatory to Ottawa, we now face the prospect of fighting "side-by-side" rather than "together." U.S. forces will have the capability to deploy such significant combat multipliers as the ground and air delivered VOLCANO Mine System, the Area Denial Artillery Munition (ADAM) coupled with the Remote Anti-Armor Munition (RAAM), the Modular Packed Mine System (MOPMS), and the fast moving aircraft delivered GATOR mine system.<sup>30</sup> Unfortunately, all these mines are banned despite the facts that these mines are a significant combat multiplier, are carefully controlled by doctrine and rules of engagement (ROE), and are 99.999% reliable. In the event of a NATO contingency where we will have to fight alongside a partner without the capability to deploy these weapons they, and we, will soon find ourselves at a distinct disadvantage. First, it has been demonstrated through extensive modeling and simulation that a force, in the context of a European contingency, without the capability to use APLs

will suffer 35% greater casualties than if they had those systems. In addition, losses of equipment and materiel would increase by 40%.<sup>31</sup> Of course, U.S. forces will still be able to use APLs at least until we sign the Treaty in 2006 in accordance with PDD 64. In that event, U.S. forces can expect to take on the bulk of the fighting and shed the most blood. The United States would have to either increase its deployed forces to counteract these losses, or the alliance may not be able to achieve its mission. At the operational level fighting alongside a NATO ally who does not have APLs could place U.S. forces in a vulnerable position, especially in a defensive operation. Facing a significant threat the U.S. forces would be able to defend much more effectively than an otherwise equal force without APLs on the flanks. These flank forces would be prone to collapse or at least premature withdraw exposing our flanks to enemy attack.

Other tactical and operational implications are only now becoming apparent to NATO members. Until the United States signs the Treaty it must demand the right to use APLs in any form during any situation that it deems necessary. This will certainly be the case. However, this will not prevent other serious operational constraints that can endanger U.S. and allied soldiers. First, the state nations will undoubtedly insist that Rules of Engagement (ROE) regarding the employment

of APLs be incredibly restrictive. Restrictive ROE will make the effective employment of FASCAM impossible. Experience at the various Combat Training Centers and in simulations has consistently proven that FASCAM must be carefully integrated into plans and orders. FASCAM is not effective when used at the "last minute" or when the unit trying to emplace it is *en extremis*.<sup>32</sup> Restrictive ROE on the use of FASCAM will certainly increase the number of U.S. and allied casualties and will jeopardize mission accomplishment. An equally dangerous possibility is deliberate vagueness during the planning process on the potential use of FASCAM systems. Signers of the Ottawa Treaty from NATO have made it clear that their forces will not be able to plan for the use of APLs even if they are conducting planning for a mission that is to be carried out by a "non state nation" such as the United States.<sup>33</sup> This is unacceptable and will lead to chaos and potential disaster.

Finally, the political leadership of NATO signers will attempt to pressure the United States to not use APL systems despite our non-state nation status. In addition, they will also probably attempt to place "up front" or "last minute" approval restrictions on our use of APLs.

Similar implications will be felt once the United States develops and fields alternatives to the APLs in current FASCAM systems. The President, in PDD 64, made the successful

culmination of the APL Alternatives Program as the main condition for the ultimate signing of the Ottawa Treaty by the United States.<sup>34</sup> One of the key criteria of a successful APL Alternatives Program is the ability of the alternative (whether it be a material, force structure, or doctrinal solution) to be at least as effective as current APLs in fielded FASCAM systems. Currently, the United States is the only NATO member nation that is actively pursuing an APL Alternative. Not a single party nation to the Ottawa Treaty is pursuing an alternative of any kind. Indeed, many of these NATO member countries are waiting for the United States to develop an alternative.<sup>35</sup> So, the United States is placed in the supremely ironic situation of not signing the treaty due to key and compelling national security reasons, while being expected to develop and field alternatives for coalition signatories. We are spending billions to develop alternatives to APLs -- APLs that do not, in any way, contribute to a humanitarian problem -- so the countries that did sign the treaty can use our expensive alternative, and so we may ultimately sign the same treaty.

The cost of an alternative will, in all likelihood, be prohibitive for our Allied partners which will simply cause us to once more bear the brunt of a military operation, suffer additional casualties because our left and right flanks cannot hold. In fact, the only problem that a successful alternative

program solves is the logistics, transfer and stockpile/storage problem.

#### IMPACT OF ANTI-PERSONNEL LANDMINE ARMS CONTROL POLICY IN COALITION WARFARE (KOREA AND SOUTHWEST ASIA)

The Ottawa Treaty's implications for coalition warfare on the Korean Peninsula and in Southwest Asia, while different, are no less significant than in NATO. In many ways Korea is the most important single theater when describing the importance of landmines to a CINC. The Commander-in-Chief of the Republic of Korea-United States Combined Forces Command has stated many times that he must have APLs in order to successfully conduct combat operations should the North Koreans invade.<sup>36</sup> The same modeling studies and simulations that demonstrated that US and coalition forces would take significantly higher casualties in a European scenario are even more sobering for Korea. These studies indicate that in a Korean scenario without APLs the CINC would not be able to defend Seoul and that in the first phase of the operation the US losses in equipment and personnel would be 35% higher than if the CINC had APLs at his disposal.<sup>37</sup>

The President, to his credit, has always attempted to protect Korean military equities throughout this process. The words have been right all along.<sup>38</sup> Still, the track record of

this administration when faced with political pressure both home and abroad is not good. PDD 64 states clearly that we will not sign the treaty "until" and "if" we find a viable alternative. Despite this key caveat, political pressures are coming to bear that may force a premature signing of the treaty.<sup>39</sup>

Although both the United States and South Korea have refused to sign the treaty, there remain some key issues to resolve. First and foremost is the storage and transfer issue. Japan is one of the state nations to Ottawa, and as such we must ensure that we either establish bilateral agreements authorizing storage and transfer of APLs, or we must accept the same burden that we will face in NATO. Increased logistical challenges, increased use of critical strategic air and sealift, and soldiers and commanders being denied a key and essential weapons system will face the Korea CINC.

Although the only use of FASCAM in a combat situation occurred during the Gulf War,<sup>40</sup> the vast open areas with few terrain features make mines less useful than in most areas of operations. Still, the CENTCOM CINC faces significant challenges if asked to fight in a coalition without APLs. Of the members of the historic Gulf War coalition, several key members are state nations of the Ottawa Convention. These signatories include the United Kingdom, Qatar, France, and Canada. Modeling studies and simulations demonstrate that the

CINC will be faced with a significant risk to his key ports and 15% higher US and coalition casualties.<sup>41</sup> The same tactical and operational issues that will face the EUCOM CINC will face CENTCOM in SWA. All key warfighting CINCs will have to face significant issues when fighting a coalition fight.

#### RECOMMENDATIONS

But what are the "fixes" for these significant problems? First, we must place great pressure upon our allies to either renounce the Ottawa Treaty or to at least modify their involvement to enable them to be able to fight effectively within the context of the coalition. Second, we must immediately establish a number of bilateral agreements with our coalition partners in all key CINC areas of operation that will enable us to store, stockpile and transfer mine delivery and mine-related ammunition within their borders. This is not an easily accomplished option since the negotiation and implementation of a great number of bilateral agreements are complex, cumbersome and will not be timely. Third, should we fail in convincing our allies of the folly of their positions, we must press them to rapidly develop and field either material alternatives to the combat systems which they can no longer employ or to increase force structure to replace that combat

power. Better yet, the United States should insist that these key coalition partners join our effort to develop and field alternatives to APLs. This will force these countries to face the implications of Ottawa Treaty that they have refused to face to date. It is critical that they share the burden with us in this effort if we are to ensure that our CINCs can fight their coalitions in the most effective manner and provide our soldiers with the weapons systems they need. This is critical if the United States is not to avoid baring the brunt of future wars.

But even more importantly the precedence set by signing this "feel good" Arms Control agreement is dangerous. Because success in concluding the Ottawa Treaty has encouraged NGOs and politicians to expand their demand for disarmament by moving to ban anti-tank mines, sub-munitions, small arms, etc. DoD must prepare to engage these advocates by devising a better Arms Control and Public Relations strategy as we move toward 2010. DoD should embark on a two-fold strategy for conducting Arms Control negotiations initiated by NGOs such as the Campaign to Ban Landmines. First, DoD must be prepared to mount a timely and professional public relations campaign to counter the largely humanitarian arguments of the NGOs by clearly stating the case for our need for these weapon systems given our global requirements and responsibilities. These same NGOs are the first to call for American leadership when there is a crisis in

the world that cries out for resolution. If our future force is indeed capabilities rather than threat-based, and will depend on early entry into immature theaters, APLs are critical to safeguarding American lives and to conducting missions. In addition, the American public must become better educated on these issues. Finally, we must insist that any and all Arms Control agreements that we sign must be enforceable, verifiable and effective. If not, we place the lives of United States' service men and women at risk and spend precious and scarce resources to implement agreements that the many will follow, but many more will not.

One March 1, 1999 the Ottawa Treaty officially entered into force with the minimum number of countries ratifying the treaty. DoD must redouble its efforts to identify all of the implications this treaty poses for our ability to successfully prosecute coalition warfare. The DoD must ensure that the United States has a plan to mitigate these issues in order to properly support our CINCs, our worldwide coalition partners, and, most importantly, our soldiers, sailors, airman, and marines.

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## ENDNOTES

<sup>1</sup> William J. Clinton. A National Security Strategy for a New Century. (Washington, DC: The White House, October 1998), p. 2.

<sup>2</sup> The Project on Demilitarization and Democracy. Making the World Unsafe for Landmines. (Washington, DC: Project on Demilitarization and Democracy, June 1995), p. 1.

<sup>3</sup> International Committee of the Red Cross. Anti-Personnel Landmines: Friend or Foe? (Geneva: International Committee of the Red Cross, March 1996), p. 9.

<sup>4</sup> Unsigned Editorial. The Nation. (Washington, DC: The Nation, 3 November 1997), p. 4.

<sup>5</sup> William J. Clinton. Presidential Decision Directive 64. (Washington, DC: The White House, 23 July 1998), p. 1.

<sup>6</sup> Every warfighting CINC, the JCS, and a number of influential retires general officers have urged the Administration to "stay the course" to not sign the Ottawa Treaty under any circumstances. The military argument for not signing the treaty is described in the decision paper entitled, "'No Brainer': Chiefs Must Not Accept Backdoor Landmine Ban," (Washington, DC: The Center for Security Policy, 21 Feb 98), p. 1-4.

<sup>7</sup> Henry Kissinger, Diplomacy. (New York: Simon and Shuster, 1994), p. 716 and Robert K. Massie, Dreadnought. (New York: Random House, 1991), p. xxiv.

<sup>8</sup> Clinton. A National Security Strategy for a New Century. p. 9.

<sup>9</sup> The Center for Security Policy (CSP), "The Ottawa Landmine Ban: Hardly 'Historic.'" (Washington, DC, 4 December 1997), p. 1.

<sup>10</sup> The Soviet installation of the Krasnoyarsk radar and the Iraqi use of poison gas on Iran are the two key violations stated in, CSP, p. 1.

<sup>11</sup> Although the NGOs that were the driving forces in the "Ban the Landmine" effort have stated that they do not want to pursue other weapons for elimination, they are doing just the opposite.

This effort is also being explicitly supported by the liberal magazine, The Nation. LTC John Spinelli, "Information Briefing for CSA on Landmine Issues." (Washington, DC: The Pentagon, 8 August 1998), p. 63. Unsigned Editorial, The Nation, p. 4. article.

<sup>12</sup> William J. Clinton, "U.S. Policy on a Landmine Control Regime." (Washington, DC: The White House, 26 August 1994), p. 1.

<sup>13</sup> William J. Clinton. A National Security Strategy for a New Century. (Washington, DC: The White House, May 1997), p. 8.

<sup>14</sup> Conference on Disarmament. "Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-Traps, and Other Devices as Amended on 3 May 1997." (Geneva, 3 May 1997), p. 1.

<sup>15</sup> The unilateral destruction of the entire stockpile of non self-destructing landmines (outside Korea) was accomplished by the United States 18 months early in June 1998. This was witnessed and verified by the author during his assignment as the Engineer Team Chief at ODCSOPS-FD from July 1997 to July 1998.

<sup>16</sup> Kevin J. Weddle. "Information Paper on Anti-Personnel Landmine Issues Update for BG Stricklin." (Washington, DC: The Pentagon, 15 May 1998), p. 1. The author of this paper worked the APL issue exclusively while assigned to ODCSOPS from the period of August 1997 to July 1998. Also, William J. Clinton, "Presidential Decision Directive 48." (Washington, DC: The White House, 26 Jun 96), and William J. Clinton, "Presidential Decision Directive 54." (Washington, DC: The White House, 17 Jan 97).

<sup>17</sup> Ibid. p. 2.

<sup>18</sup> CSP, p. 2.

<sup>19</sup> International Campaign to Ban Landmines. "Convention on the Prohibition of the Use, Stock-piling, Production and Transfer of Anti-Personnel Landmines and on Their Destruction." (Oslo, 18 September 1997), p. 2. This is the Treaty that is commonly known (and will be described as such in this paper) as the Ottawa Treaty or the Ottawa Convention.

<sup>20</sup> The influence of the tragic death of Princess Diana in late August on the treaty negotiations in Oslo in early September 1997 cannot be overlooked. Most observers stated that her death made the treaty's ratification all but certain. It further branded the United States as the major "roadblock" to the eventual ban off all landmines. Unsigned Editorial, Nation p. 3, Bzio Bonsignore, "Of Presidents, Mines, and Guts." in Military Technology, November 1997, p. 3, and Tom Squitieri, "After Treaty's Fanfare, Mines Go On Killing." in USA Today, 2 Dec 98, p. 21A.

<sup>21</sup> William J. Clinton. "Remarks by the President on APLs." (Washington, DC: The White House, 17 September 1997), p. 2.

<sup>22</sup> Weddle, p. 2.

<sup>23</sup> Clinton. PDD 64, p. 1, Peter O'Neill. Anti-Personnel landmine Alternatives Study. (Washington, DC: Office of the Under Secretary of Defense for Acquisition and Technology, 7 February 97), p. 1-4, Colonel Thomas E. Dessen, Acquisition Strategy Report for Non-Self Destructing Anti-Personnel Landmines. (Picatinny Arsenal: Office of the Program Manager, Mines, Countermine, and Demolitions, 11 Feb 98, John J. Hamre, "Anti-Personnel Landmine Alternatives Directive." (Washington, DC: Office of the Deputy Secretary of Defense, 21 Oct 97), and Lt. Gen. David J. McCloud, Mission Needs Statement for battlefield Shaping and Force Protection Against Personnel Threats, ACAT Level 1. (Washington, DC: Joint Requirements Oversight Committee, 24 Nov 97). PDD 64 significantly changed the environment in which the DoD was attempting to determine the impacts of fighting a future conflict without many of the tools and in particular it greatly changed the manner in which DoD (and particularly the Army) was searching for alternatives to both "dumb" and "smart" mines. The overall alternative effort is beyond the scope of this study; the key references to this study and the acquisition strategy is listed above.

<sup>24</sup> O'Neill, p. 4. With the release of PDD 64 the DoD has to considerably expand its search for an alternative to APLs. Instead of simply searching for an alternative to "dumb" non self-destructing mine we now must pursue a search for an alternative to all mines including those that are remotely delivered and that self-destruct. The cost for alternatives to the "dumb" mines is estimated at \$4.5 billion. If the alternatives program is expanded to include alternatives for the APLs embedded within FASCAM systems the cost will increase by at

least three-fold to over \$12 billion during a time of critically austere budgets. This money will come out of the Army budget which can least afford the reduction in its modernization funds.

<sup>25</sup> Dr. Eugene L. O'Brien. Project Manager for Selected Ammunition: A Perspective of History, (Picatinny Arsenal, NJ: Office of the PM-MCD, 1994), p. 32.

<sup>26</sup> Weddle, LTC Kevin. "Interview with Allied Liaison Officers from the United Kingdom, Germany, France, Australia, and Canada on the Military Impact of the Ottawa Treaty on their Country's Defense." (Washington, DC: The Pentagon, 25 February 1998). During this interview the liaison officers of these NATO allied countries stated emphatically that the civilian leaders of their countries did not consult the militaries before signing the Ottawa Treaty. All agreed that their militaries were violently opposed to the treaty.

<sup>27</sup> International Campaign to Ban Landmines. "Ottawa Treaty," p. 2.

<sup>28</sup> "States parties" are defined in the Ottawa Treaty as those states which have signed the Ottawa Convention. "Non States Parties" are those nations which have not signed, such as the United States, North and South Korea and Turkey.

<sup>29</sup> The unclassified assessment of the general feeling of NATO coalition partners on their thoughts on the implementation and conditions under which the Ottawa Treaty will be enforced is taken from the following documents. J7, Joint Staff Memo, "War plan Review for APL Treaty Impact." (Washington, DC: Joint Staff, 14 Nov 97) (Secret). J7, Joint Staff Planning Memo, "War Plan Review for APL Treaty." (Washington, DC: Joint Staff, 9 Feb 98) (Secret). J7, Joint Staff Planning Memo, "Results of CINC War Plan Review for APL Treaty Impact." (Washington, DC: Joint Staff, 9 Feb 98) (Secret). OCSOPS, Army Planner's Memo, "An Updated Assessment of the Incorporation of the Ottawa Convention on APLs into NATO Military Policy, Doctrine and Planning." (Washington, DC: Pentagon, 4 Sep 98) (NATO/Confidential). ODCSOPS, Army Planner's Memo, "Analysis of the Military Implications of the Ottawa Convention on APLs." (Washington, DC: Pentagon, 22 Sep 98) (NATO/Confidential).

<sup>30</sup> The FASCAM arsenal of the United States forms the bulk of our mine inventory. FASCAM is safe, reliable and is used only under strict guidelines and doctrine. Program Manager, Mines,

Countermines and Demolitions, FASCAM: The Family of Scatterable Mines, (Picatinny Arsenal: PM-MCD, Feb 91), pp. 2-23.

<sup>31</sup> LTC John Spinelli and LTC Kevin J. Weddle, "Landmine Issues Update for Gen Crouch, VCSA." (Washington, D.C.: The Pentagon, 19 Dec 97), p. 28. This briefing was prepared at the request of the VCSA Gen Crouch. The two authors sanitized the results of a classified modeling and simulation study that was undertaken to show the consequences, if any, of the execution of major warplans with and without the use of anti-personnel landmines.

<sup>32</sup> All studies and engineer after action reviews (AARs) for rotations at the National Training Center, the Joint Readiness Training Center and the Combat Training Centers clearly and emphatically state that for FASCAM systems to be effective they must be carefully planned and integrated into the operational plan.

<sup>33</sup> In their individual responses to a classified questionnaire, NATO state nations stated that they will not allow any of their planners to plan for the use of FASCAM even if it is to be employed by a non-state nation. J7, Joint Staff Memo, "War plan Review for APL Treaty Impact." (Washington, DC: Joint Staff, 14 Nov 97) (Secret). J7, Joint Staff Planning Memo, "War Plan Review for APL Treaty." (Washington, DC: Joint Staff, 9 Feb 98) (Secret). J7, Joint Staff Planning Memo, "Results of CINC War Plan Review for APL Treaty Impact." (Washington, DC: Joint Staff, 9 Feb 98) (Secret). OCSOPS, Army Planner's Memo, "An Updated Assessment of the Incorporation of the Ottawa Convention on APLs into NATO Military Policy, Doctrine and Planning." (Washington, DC: Pentagon, 4 Sep 98) (NATO/Confidential). ODCSOPS, Army Planner's Memo, "Analysis of the Military Implications of the Ottawa Convention on APLs." (Washington, DC: Pentagon, 22 Sep 98) (NATO/Confidential).

<sup>34</sup> Clinton, "PDD 64."

<sup>35</sup> Weddle, "Interview with Allied Engineer Liaison Officers." During this interview the officers stated that none of their countries, despite the urgings of their militaries, had begun any studies of how the Ottawa Treaty will affect military operations. They also stated that no money or effort is being undertaken to replace APLs either through force structure or a material alternative. They stated that their countries are waiting to see what the United States decides to do.

<sup>36</sup> Robert Bell, "Press Briefing Transcript by White House Press Secretary on US Anti-Personnel Landmine Policy Announcement by the President." (Washington, DC: The White House, 17 Sep 97), p. 10.

<sup>37</sup> Spinelli and Weddle, "Briefing to Gen Crouch," p. 28.

<sup>38</sup> The Clinton administration has been consistent when discussing the critical requirement for APLs in Korea. Bell, p. 10.

<sup>39</sup> Patrick Leahy, Leahy Amendment to the Senate Foreign Operations Appropriations Bill. (Washington, DC: Office of Senator Leahy, 21 Sep 95) and Senator Patrick Leahy, "Statement of Sen. Patrick Leahy on U.S. Policy on the International Landmine Treaty." (Washington, DC: The Office of Senator Leahy, 22 May 98). Madeleine K. Albright, "Letter from Secretary of State to the CJCS." (Washington, DC: The Office of the Secretary of State, 18 Sep 98). Samuel R. Berger, "Letter from the NSA to Senator Patrick Leahy on US APL Policy." (Washington, DC: The White House, 15 May 98). Leahy has consistently opposed any solution to the APL issue short of immediate signing of the Ottawa Treaty. When the NSA and State Department (see Albright and Berger letters above) announced the essential text of PDD 64 in May 1998, Sen Leahy, while applauding the administration's pledge to move toward signing by 2006, stated that he would redouble his efforts to force signing of the Treaty with the next two years.

<sup>40</sup> International Committee of the Red Cross, p. 16.

<sup>41</sup> Spinelli and Weddle, p. 28.

## BIBLIOGRAPHY

- Albright, Madeleine K., "Letter from Secretary of State to the CJCS." Office of the Secretary of State: Washington, D.C., 18 Sep 98.
- Bell, Robert, "Press Briefing Transcript by White House Press Secretary on US Anti-Personnel Landmine Policy Announcement by the President." The White House: Washington, D.C., 17 Sep 97.
- Berger, Samuel R., "Letter from the NSA to Senator Patrick Leahy on US APL Policy." The White House: Washington, D.C., 15 May 98.
- Biddle, Stephen D. et al, Landmine Arms Control. Institute for Defense Analysis: Washington, D.C., May 96.
- Biddle, Stephen D. et al, The Military Utility of Landmines: Implications for Arms Control. Institute for Defense Analyses: Washington, D.C., 31 Jul 96.
- Bonsignore, Ezio. "Of Presidents, Mines, and Guts." in Military Technology, November 1997, p. 3.
- Bureau of Political Military Affairs, "Information Paper: U.S. Demining Initiative." Department of State: Washington, D.C., 13 Nov 97.
- Carpenter, R.W., et al, Simulation and Analyses of Anti-Personnel Landmine Replacement Systems. Institute for Defense Analyses: Washington, D.C., Nov 97.
- Center for Security Policy, "'No Brainer': Chiefs Must Not Accept Backdoor Landmine Ban." CSP: Washington, D.C., 21 Feb 98.
- Center for Security Policy, The Ottawa Landmine Ban: Hardly 'Historic.' CSP: Washington, D.C., 4 Dec 97.
- Christman, Captain William, "Information Paper: Summary of Convention on Conventional Weapons Negotiations on Landmines." J5: Washington, D.C., 7 May 96.
- Clinton, William J., A National Security Strategy for a New Century. The White House: Washington, D.C., May 97.

- Clinton, William J., A National Security Strategy for a New Century. The White House: Washington, D.C., October 1998.
- Clinton, William J., "Presidential Decision Directive 48." The White House: Washington, D.C., 26 Jun 96.
- Clinton, William J., "Presidential Decision Directive 54." The White House: Washington, D.C., 17 Jan 97.
- Clinton, William J. "Presidential Decision Directive 64." The White House: Washington, D.C., Jul 98.
- Clinton, William J., "United States' Policy Announcement on Anti-Personnel Landmines." The White House: Washington, D.C., 17 Sep 97.
- Cohen, William, "Letter from the Secretary of Defense to Senator Patrick Leahy on DoD APL Stance." Office of the Secretary of Defense: Washington, D.C., 12 Jan 98.
- Convention on Conventional Weapons, Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices as Amended on 3 May 96. United Nations: Geneva, 3 May 96.
- Department of State, "Department of State Guidance for Anti-Personnel Landmines." Department of State: Washington, DC, 27 Feb 98.
- Dessen, Colonel Thomas E., Acquisition Strategy Report for Non-Self Destructing Anti-Personnel Landmines. Office of the Program Manager, Mines, Countermines, and Demolitions: Picatinny Arsenal, 11 Feb 98.
- Hambric, Harry N. And William C. Schenk., "The Anti-Personnel Mine Threat", Night Vision Electronic Sensors Directorate, Fort Belvoir, VA. No Date.
- Hamre, John J., "Anti-Personnel Landmine Alternatives Directive." Office of the Deputy Secretary of Defense: Washington, D.C., 21 Oct 97.
- Hawkins, Thomas and Edward F. Bruner, Landmines: Basic Facts and Congressional Concerns. Congressional Research Service: Washington, D.C., 27 Oct 97.

International Committee of the Red Cross, Anti-Personnel Landmines: Friend or Foe? International Committee of the Red Cross: Geneva, Mar 96.

International Committee of the Red Cross, Mines: A Perverse Use of Technology. International Committee of the Red Cross: Geneva, 1992.

J5, Strategic Plans and Policies, "Executive Summary: Impact of the Public Law 104-107, APL Use Moratorium on Warfighting capabilities." J5: Washington, D.C., undated memorandum.

J7, Joint Staff Memo, "War plan Review for APL Treaty Impact." Joint Staff, Washington, DC, 14 Nov 97 (Secret).

J7, Joint Staff Planning Memo, "War Plan Review for APL Treaty." Joint Staff: Washington, DC, 9 Feb 98 (Secret).

J7, Joint Staff Planning Memo, "Results of CINC War Plan Review for APL Treaty Impact." Joint Staff: Washington, DC, 9 Feb 98 (Secret).

Jones, General David and 14 other Retired General Officers, "An Open Letter to the President." Vietnam Veterans of American Foundation: Washington, D.C., 3 Apr 96.

Kissinger, Henry, Diplomacy, Simon and Shuster, New York, 1994.

Lea, Jim, "Cohen, Visiting DMZ, Defends U.S. Mine Use," in Pacific Stars and Stripes. 23 Jan 98.

Leahy, Patrick, Leahy Amendment to the Senate Foreign Operations Appropriations Bill. Office of Senator Leahy: Washington, D.C., 21 Sep 95.

Leahy, Senator Patrick, "Statement of Sen. Patrick Leahy on U.S. Policy on the International Landmine Treaty." Office of Senator Leahy: Washington, D.C., 22 May 98.

Magnoli, Douglas E., Illustration of the Utility of Using Less than Lethal Munitions to replace Anti-Personnel Landmines. Lawrence Livermore National Laboratory: Los Angeles, undated briefing.

Massie, Robert K., Dreadnought, Random House, New York, 1991.

McCloud, Lt.Gen. David J., Mission Needs Statement for battlefield Shaping and Force Protection Against Personnel Threats, ACAT Level 1. Joint Requirements Oversight Committee: Washington, D.C., 24 Nov 97.

McCurry, Michael, "Statement by the Press Secretary: U.S. Announces APL Policy." The White House: Washington, D.C., 16 May 96.

McCurry, Michael, "Statement by the Press Secretary: U.S. to Join the Ottawa Process." The White House: Washington, D.C., 18 Aug 97.

NATO Military Staff, "Implication of the Incorporation of the Ottawa Convention on APL on NATO Military Doctrine, Planning and Policy." ODCSOPS: Washington, DC, 8 Apr 98 (NATO/Restricted).

ODCSOPS, Army Planner's Memo, "An Updated Assessment of the Incorporation of the Ottawa Convention on APLs into NATO Military Policy, Doctrine and Planning." ODCSOPS: Washington, DC, 4 Sep 98 (NATO/Confidential).

ODCSOPS, Army Planner's Memo, "Analysis of the Military Implications of the Ottawa Convention on APLs." ODCSOPS: Washington, DC, 22 Sep 98 (NATO/Confidential).

O'Brien, Dr. Eugene L., Project Manager for Selected Ammunition: A Perspective of History, Picatinny Arsenal, NJ, 1994.

O'Hanlon, Michael, "US and Landmine Ban: Pentagon's Legitimate Concerns Should be Addressed First," in Christian Science Monitor, 4 Jun 98.

O'Neill, Peter, APL Alternatives Implementation Plan. Office of the Under Secretary of Defense for Acquisition and Technology: Washington, D.C., 23 Feb 98.

O'Neill, Peter, Anti-Personnel landmine Alternatives Study. Office of the Under Secretary of Defense for Acquisition and Technology: Washington, D.C., 7 Feb 97.

Ottawa Convention, Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction. Ottawa Convention: Oslo, 18 Sep 97.

Program Manager, Family of Scatterable Mines (FASCAM).  
Picatinny Arsenal: New Jersey, Feb 91..

Project on Demilitarization and Democracy, Making the World Unsafe for Mines: A Timetable for Deploying Military Alternatives and Implementing a Worldwide ban on the Smallest Weapon of Mass Destruction. Project on Demilitarization and Democracy: Washington, D.C., Jun 95.

Redd, John S., "Draft US Army Engineer School White Paper on Anti-Personnel Landmines (APL)." Engineer School: Fort Leonard Wood, 15 May 97.

Rossiter, Caleb, "Clinton Must Finish the Job to Ban Landmine Deployment," in Defense News, 24 Feb - 2 Mar 97.

Science Applications International Corporation, Achieving a Worldwide Ban on Anti-Personnel landmines: Choices, Obstacles and Next Steps. SAIC: Washington, D.C., 19 Dec 96.

Schneck, William C. "The Origins of Military Mines"..  
Unpublished manuscript.

Shalikashvili, General John M., "Letter from CJCS to Secretary of State." Office of the CJCS: Washington, D.C., 6 Sep 95.

Shalikashvili, General John M., "News Release on US Landmine Policy." Office of the Assistant Secretary of Defense for Public Affairs: Washington, D.C., 18 Jun 96.

Shelton, General Henry H. and William S. Cohen, "Letter from the Sec Def and the CJCS to Senator Strom Thurmond." Office of the Secretary of Defense: Washington, D.C., 1 May 98.

Spinelli, LTC John, Humanitarian Demining Operations and the US Army. ODCSOPS: Washington, D.C., 24 Dec 96.

Spinelli, LTC John, "Information Paper: NATO Questionnaire on APL." ODCSOPS: Washington, DC, 26 Jun 98  
(NATO/Confidential).

Spinelli, LTC John, "Information Briefing for CSA on Landmine Issues." ODCSOPS: Washington, DC, 8 August 1998.

Spinelli, LTC John, "Information Paper: Provide BG Stricklin an APL Issues Update." ODCSOPS: Washington, D.C., 15 May 98.

Spinelli, LTC John and LTC Kevin J. Weddle, "Landmine Issues Update for Gen Crouch, VCSA." ODCSOPS: Washington, D.C., 19 Dec 97.

Squitieri, Tom. "After Treaty's Fanfare, Mines Go On Killing." in USA Today, 2 Dec 98, p. 21A.

Stewart, Jeb, Operational Effectiveness of an AP/AT Mixed Minefield. US Army Engineer School: Fort Leonard Wood, 11 Dec 97.

Thumm, Mike, Point/Counterpoint on Various Issues for Open Session of the Ottawa APL Conference "NGO Parliamentarian Panel." Joint Staff: Washington, D.C., 25 Sep 96.

Thumm, Mike, "US Position on Regional Action and Anti-Personnel Landmine Free Zones." Joint Staff: Washington, D.C., 23 Sep 96.

United States Army Engineer Center (USAEC), "Mine Employment Doctrine." Engineer School: Fort Leonard Wood, undated information paper.

United States Army Engineer Center (USAEC), The Army's 1997 Countermine Modernization Strategy, Fort Leonard Wood, MO, 1997

Unsigned Editorial. "Beyond Landmines," in The Nation. 3 November 1997, p. 5.

Wareham, Mary, "Press Release from the International Campaign to Ban Landmines." International Campaign to Ban Landmines: Washington, D.C., 26 Aug 96.

Watson, Bryan G., "Landmine Embarrassment: Another View," in The Army Times, 6 Jul 98.

Weddle, LTC Kevin J., "Information Paper on United States' Mine Systems and their Characteristics." ODCSOPS: Washington, D.C., 27 Aug 97.

Weddle, LTC Kevin. "Interview with Allied Liaison Officers from the United Kingdom, Germany, France, Australia, and Canada on the Military Impact of the Ottawa Treaty on their Country's Defense." 25 Feb 98.

Weddle, LTC Kevin J., US Military Use of Anti-Personnel Landmines (APL): Information Briefing for DoD Workshop on APL Issues. ODCSOPS: Washington, D.C., 12 May 98.

Weddle, Kevin J., U.S. Military Use of Anti-Personnel Landmines:  
Information Briefing for BG Toney Stricklin. ODCSOPS:  
Washington, D.C. 14 May 98.